

**REMARKS**

OK, In the specification, TABLE 1 on page 29 of the originally filed specification has been amended such that in the "Pd supported layer" column for "Ex. 3," the table has been amended to read "Lower layer Ce-based." This amendment finds support in the specification, for example, in Example 3 on page 20, lines 24-26, and page 21, lines 1-11 of the originally filed specification.

Claims 1-10 are pending in the present application. Claims 1, 3, and 10 have been amended. Claim 11 has been added. Claim 11 finds support in the specification, for example, in Example 6 on pages 23-25 of the originally filed specification.

Claims 1-10 are rejected under 35 USC § 102(a) as being anticipated by EP '779.  
Claims 1-10 are rejected under 35 USC § 102(b) as being anticipated by JP-11-151439.  
Claims 1-10 are rejected under § 102(e) as being anticipated by Sung '297. Claims 1-10 are rejected under 35 USC § 102(b) as being anticipated by Sung '507. Claims 1-10 are rejected under 35 USC § 103(a) as being unpatentable over EP 1,013,334 A1. Claims 1-10 are rejected under 35 USC § 103(a) as being unpatentable over Matsumoto '699. Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-10 of copending application Serial No.

09/902,570.

**Rejection of Claims 1, 3, and 10 under 35 USC § 112**

Claims 1, 3, and 10 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the Office Action, the Examiner states:

OK. { Claim 1 recites the limitation "previously" in lines 3 and 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the heat resisting oxide" in lines 2 and 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the catalyst carrier" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claims 1, 3, and 10 have been amended to overcome the rejection.

**Rejection of Claims 1-10 under 35 USC §§ 102(a) and (b) as being anticipated by EP '779 and JP '439**

Claims 1-10 are rejected under 35 USC § 102(a) as being anticipated by EP '779.

Claims 1-10 are rejected under 35 USC § 102(b) as being anticipated by JP-11-151439.

These rejections are respectfully traversed. EP '779 is a counterpart application of JP '439.

Both EP '779 and JP '439 disclose the following composition in Embodiment 6:

Lower layer: Pd-supporting CZY (cerium complex oxide)

Upper layer: Pt & Rh-supporting ZCLIN (zirconium complex oxide)  
Pt-supporting CZY (cerium complex oxide)

This composition disclosed in both references corresponds to Example 3 of the present application. This composition comprises the lower layer having Pd-supported cerium

complex oxide. Currently amended Claim 1 now defines the catalyst composition of the present application comprising the lower layer having Pd-supported alumina, corresponding to Example 1 of the present application. Both EP '779 and JP '439 fail to disclose or suggest the composition as recited in amended Claim 1 of the present application.

As can be seen in TABLE 1 of the present application, the composition of Example 3 (i.e., Embodiment 6 in the cited references) differs from that of Example 1 in that Example 1 employs alimina for supporting palladium in the lower layer while Example 3 employs

cerium complex oxide. The composition of Example 3 and the composition of Example 1 are the same in the amount of noble metals to be supported (4.0 g/L-cat).

When you look at the CO-NO<sub>x</sub> cross-point purifying rate (%) in TABLE 1, you can see that Example 1, which corresponds to amended Claim 1, demonstrates a higher rate (96%) compared to Example 3 (94%).

That is to say, the composition recited in amended Claim 1 of the present application will result in a higher rate of CO-NO<sub>x</sub> cross-point purifying rate than that found in the composition disclosed in EP '779 and JP '439 (i.e., Embodiment 6).

Example 6 of the present application corresponds to the composition recited in the newly added Claim 11, as mentioned above. In TABLE 1, Example 6 exhibits a relatively good rate of 92% in CO-NO<sub>x</sub> cross-point purifying rate with the amount of noble metals to be supported being 1.8 g/L-cat, less than half amount of Example 3 (4.0 g/L-cat).

In view of the above, the catalyst compositions of the present invention as recited in amended Claim 1 as well as the newly added Claim 11 provide better purifying performance than the composition disclosed in EP '779 and JP '439.

**Rejection of Claims 1-10 under 35 USC § 102(b)**

*OK not layered*

Claims 1-10 are rejected under 35 USC § 102(b) as being anticipated by Sung '507.

This rejection is respectfully traversed. The '507 patent discloses in its Examples a catalyst composition wherein noble metals are supported on a ceria-zirconia composite. In the composition of the '297 patent, however, the noble metals are merely supported on the ceria-zirconia composite. The '507 patent fails to disclose or suggest the composition where rhodium and platinum are supported on a zirconium complex oxide and platinum is

supported on a cerium complex oxide beforehand, and then, the oxides are mixed, as recited in the present application. Further, the '507 patent fails to disclose or suggest the composition as recited in amended Claim 1 and the newly added Claim 11 of the present invention.

**Rejection of Claims 1-10 under 35 USC § 102(e)**

*A.K. not layered*

Claims 1-10 are rejected under § 102(e) as being anticipated by Sung '297. This rejection is respectfully traversed. The '297 patent discloses in its Examples a catalyst composition wherein noble metals are supported on a ceria-zirconia composite. In the composition of the '297 patent, however, the noble metals are merely supported on the ceria-zirconia composite. The '297 patent fails to disclose or suggest the composition wherein rhodium and platinum are supported on a zirconium complex oxide and platinum is supported on a cerium complex oxide beforehand, and then, the oxides are mixed, as recited in the present application. Further, the '297 patent fails to disclose or suggest the composition as recited in amended Claim 1 and the newly added Claim 11 of the present invention.

**Rejection of Claims 1-10 under 35 USC § 103(a)**

Claims 1-10 are rejected under 35 USC § 103(a) as being unpatentable over EP 1,013,334 A1. This rejection is respectfully traversed. The Examiner states in the Action that EP '334 teaches a catalytic coating comprising zirconium complex oxide, noble metals and alkaline earth metals. In the composition of EP '334, however, the noble metals are merely supported on the zirconium complex oxide. EP '334 fails to disclose or suggest the

composition where rhodium or platinum are supported on a zirconium complex oxide and platinum is supported on a cerium complex oxide beforehand, and then, these oxides are mixed, as recited in the present application.

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Claims 1-10 are rejected under 35 USC § 103(a) as being unpatentable over Matsumoto '699. This rejection is respectfully traversed. The '699 patent discloses a catalyst wherein an upstream side catalyst is disposed on an upstream side and a downstream catalyst is disposed on a downstream side with respect to an exhaust gas flow. However, the '669 reference fails to disclose or suggest that a catalyst is prepared in the form of upper and lower layers and further fails to disclose or suggest that the upper layer and the lower layer have specific compositions, respectively. Further, the '669 patent fails to disclose or suggest the composition as recited in amended Claim 1 and added Claim 11 of the present application.

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**Provisional Rejection Under Judicially Created Doctrine  
of Obviousness-Type Double Patenting**

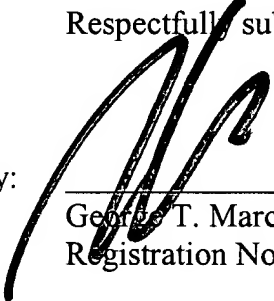
Claims 1-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-10 of copending application Serial No. 09/902,570. Claim 1 has been amended herein. As a result, the pending claims, as well as the added claim, are distinguishable over Claims 1-10 of application Serial No. 09/902,570 to overcome the rejection. The undersigned representative respectfully requests that the Examiner withdraw this rejection.

CONCLUSION

Should the Examiner determine that any further action is necessary to place this application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below. No further fees are believed due, however, if there are any fees due, please charge to deposit account No. 501458.

Respectfully submitted,

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